



THE HARVEST

Macdonald College

no.5 jan. 1981

\$ 24 000 in our pockets !!

Did you know that the Students' Council has actually \$ 24 000 to spend for the winter term? Did you know that the last open society SC meeting (Wednesday the 21st, 7 pm) involved 12 persons, that means a representation of 1.4% of the student's community?

The next issue of the Harvest will be entirely devoted to these problems, the main one being:

HOW TO GET BACK TO THE MAC SPIRIT!

Review of the problems discussed wednesday:

-How to distribute the \$ 24 000 left

- . increase the salaries of the CC workers (\$ 11 000)
- . renovate the CC lounge on a long term basis (big total over \$ 15 000 to be shared with CC committee)
- . support more activities (if you want to create a club of antiques, go ahead)
- problems of some activities (macadam café, the Harvest, the Ceilidh orientation, Gilles Vigneault concert, etc.): how to change the financial concept of these, in term of budgets, benefits, etc?

Very shortly, a meeting will be held in MS building,

during the day, and we hope a lot more of students will get involved into the students' community.

We are all concerned about MAC spirit.

Don't you want to do something? P.S.: the door of the Harvest is open to your articles for the next issue (mid-february?). We would like to have echoes of all activities, their problems, their wishes, and the most important of all, how would YOU get the Mac spirit back from its tomb?

Christine

WHY ECOLOGICAL AGRICULTURE ?

In order to cut through some of the confusion that seems to befog ecological agriculture, here is a brief outline of the goals that the ecological agriculture movement is trying to achieve:

- 1) A sustainable food production system:
 - preserving the fertility, structure and animal life of the soil, thus maintaining the natural resource upon which our food system is based.
 - minimizing dependence on non-renewable resources, especially energy.
 - developing of stable, self-perpetuating pest control methods.

- preserving the genetic diversity of crop plants to ensure a rich stable genetic resource.

- 2) Production of healthy, nutritious food:

- breeding for nutrition rather than simply for yields or for ease of harvesting and handling.
- eliminating pesticide residues.

- 3) Minimizing environmental impact of agriculture:

- elimination of toxic chemical pesticides and byproducts.
- preventing water pollution from fertilizer runoff and soil erosion.

- 4) Maximizing the individual's control over his food supply by changing the present food system from one which is substantially controlled by several large corporations to one in which the links between consumer and producer are as short as possible (implying consumption of locally grown foods, direct marketing channels, minimum processing of foods).

- 5) Recognition of food as a basic human requirement, not as a commodity to be manufactured and from which profit can be realized. Recognition of land as the resource from which that basic requirement flows, not as a factor of production to be bought, sold, depreciated and finally disposed of.

VIGNEAULT



TICKETS ARE GOING LOW...BUY YOURS

s'en vient ...

* NEWS *

To better answer the expectations and hopes of its regular and loyal readers, the Harvest will reserve one page for opinions- mail -good ideas - suggestions and other reproaches that we don't hear anything about.

SO...if you are satisfied... if you are not, or if you just feel like making a party about the aquatic flora of the lakes in Wisconsin : TAKE YOUR CHANCE...

Anyway, without the more concrete participation of the inhabitants of MacDonald, the Harvest, like any other students' association, would be doomed to failure.

We are waiting for you at the corridor corner. The treasury box is in the C.C.

***** THE STAFF *****

M.A.B. mouvement pour l'agriculture biologique

Il y a 7 ans, se formait un mouvement pour l'Agriculture Biologique (MAB) au Québec. Aujourd'hui il semble bien décidé à ne pas abandonner ses objectifs d'information et de regroupement pour une agriculture plus "écologique". Le temps serait peut-être mal choisi car l'intérêt porté au MAB par les consommateurs, les producteurs et certains fonctionnaires du Ministère de l'Agriculture, est à la hausse.

Ce modeste regain d'enthousiasme est en partie explicable par le fait que le MAB, depuis mars 80, s'est vu invité (ou s'est invité) à la table de discussion de l'UPA. Ceci par l'intermédiaire de C. Boulanger qui occupe simultanément les postes de coordinateur du MAB et d'Agent de Développement des Productions Spéciales (agriculture biologique, cuniculture, pisciculture, etc.). Cette reconnaissance du MAB par une union dont la crédibilité n'est plus à faire, risque fort de servir de porte-voix

au MAB lorsqu'il s'agira de discuter avec le gouvernement pour obtenir les changements qu'il juge nécessaires: notamment au sujet de la loi sur les crédits agricoles qui défavorisent, selon plusieurs, les producteurs biologiques (ou autres) opérant à petite échelle, les revenus de leur production étant inférieurs au minimum exigé pour être éligible au crédit.

De plus à l'heure actuelle, le MAB et l'UPA travaillent afin d'établir les couts de production des produits écologiques à partir de l'expérience des producteurs du Québec. L'étude permettra d'établir le niveau de rentabilité, d'efficacité et par la suite le prix des produits sur le marché.

Une autre préoccupation du MAB vise à obtenir auprès du Ministère de l'Agriculture les fonds nécessaires à l'encadrement technique et professionnel des producteurs ou aspirants producteurs en agriculture biologique qui, trop souvent manquent des

conseils de personnes ressource.

Malgré tout, le MAB compte environ 500 membres, dont environ 130 producteurs et 50 autosuffisants, (les autres étant aspirants ou consommateurs ou jardiniers) regroupés en 16 régions ou secteurs d'intérêt. Deux groupes de moindre importance cependant, mais qui partagent les mêmes objectifs se sont affiliés au MABet on verra

Services offerts par le MAB:

- fourniture d'engrais et amendants naturels
- assistance pour la mise en marché
- service de librairie et de documentation en agriculture biologique
- bulletin bimestriel
- conférences, etc.

Jean Vigneux

Eaton Valley : saleable bio-agriculture ?

Eaton Valley is a company dispensing agricultural services, and established three years ago near Cookshire in Cantons de l'est. Their aim is to promote new agricultural products such as algae, compost, insecticidal soap, non refined fertilizer. But their services are more extensive i.e. they give advices to farmers willing to change to biological agriculture or simply willing to use less chemical pesticides such as in orchards using IPM (integrated pest management).

Many times it is said that they are just selling their products : a big company with big \$.... But why shouldn't biological agriculture be saleable? Especially since it fulfils an essential role in providing alternatives solutions to conventional agriculture problems.

Let's think about it...

"...dedicated to that army of loners who have fallen, and whose casualties increase every day. I believe that, just as in many wars, many of those who die in the daily battle of life are good, sensitive, intelligent men and women whose talent are needed. Many of them appalled by the world they are forced to live in, but, ironically, their deaths diminish the possibility of beneficial social change.

...Even to live the most ordinary life (white, male, heterosexual with average intelligence, and no obvious disabilities) sometimes requires great effort; while to live an extraordinary life (which is what every indian or black, gay or female person must try to do, just to break even - in career opportunities, social privileges, and income, to say nothing of achieving happiness) requires prodigious ingenuity and endurance in periods of maximum stress."

Is there any way out? John Hofsess
And in agriculture (basis of anything) new ideas exist already but only a few people are aware

of them. Biological agriculture is one way to get out of that system we already know is destroying the environment and economically unacceptable (we'll come back on the economic part of agriculture in a special issue later). To say nothing of achieving happiness, again.

Are we students merely to learn about the bad shape the world is in and forget the more optimistic perspective that must be the one for tomorrow?

We are responsible for tomorrow the same way our parents are responsible for today. Our task is simple: to make the world a better place to live for EVERY human being without fear of the next day. But if the task is simple, the means are not so obvious. We'll have to reconsider so many values and ways of life that we'd better work at it right now.

I'm not sure that our parents are so proud of what's left to keep their children's mind busy.

Christine Deschamps

SEMINARS: ECOLOGICAL AGRICULTURE

The Ecolifestyles group will be sponsoring a series of seminars on ecological agriculture this term. The second in the series will be held Feb. 10. Russell Pocock, an organic vegetable producer from the Sherbrooke area will be giving pointers on buying land and machinery, choice of crops, how to market & how to grow vegetables organically.

The group will be inviting other farmers (beef & dairy) from around the province, and have asked Dick Harwood of the Organic Farming and Gardening Research Centre in Pennsylvania to speak about the recently released USDA report on organic farming.

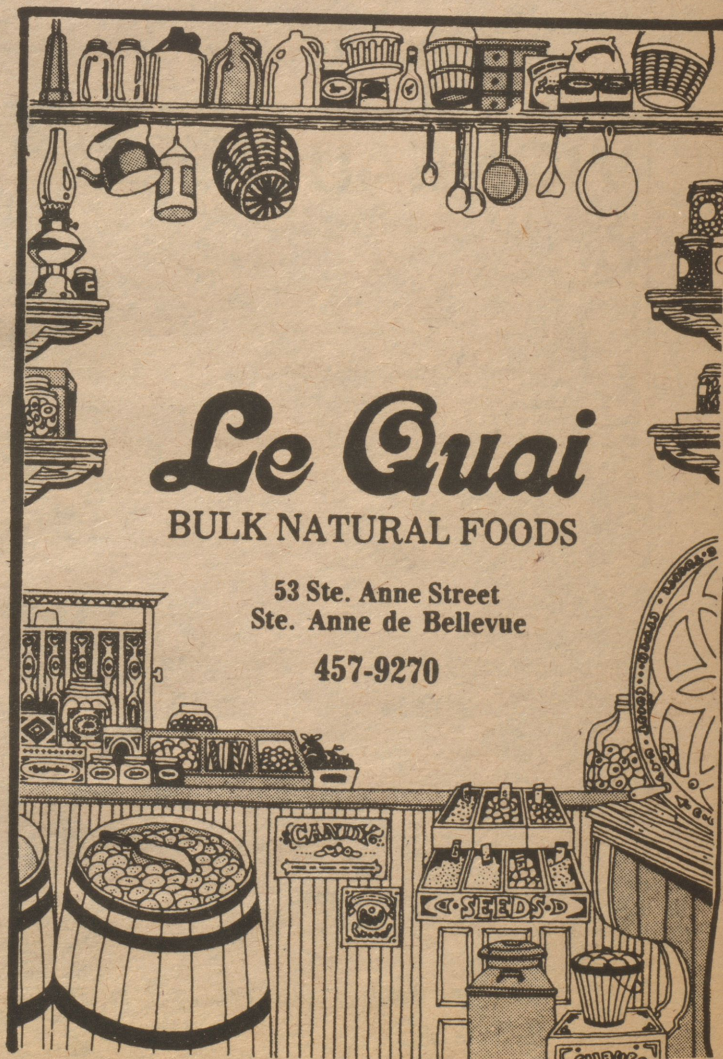
Here's your chance to find out what it's all about!

E.A.P.

For anyone interested in information on ecological agriculture, nutrition, energy, the environment, politics of food, may we suggest you come down to the Ecological Agriculture Project. We have about 2,000 books, 60 journals and 25,000 articles as well as several films and slide/tape shows, so we might be able to help you.

Barton Rm. 1-022

457-2000 ext. 190



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Ste. Anne de Bellevue
457-9270

EDITORIAL

"Macbio, Biomac?"

When I read the publication of the C.P.V.Q. (Conseil de production végétale du Québec) under the heading "Remarque sur l'agriculture biolo gique":

"Les terres abandonnées a elles-memes sont vouées a une dégradation qui peut aller jusqu'a leur destruction."

I was enraged because, in fact, this remark misses the point of biological agriculture. Far from abandoning the land to its ultimate destruction, biological agriculture has as its most basic principle the importance of conserving the soil fertility; is more concerned with soil health than conventional agriculture. But not only this, biological agriculture's approach is also concerned with how our entire food (production, distribution, processing) system is integrated into the social, economic, and industrial context: the earth.

Since the second world war, agricultural research and agricultural schools have been directed towards conventional agriculture and still is

today. If our energy was directed into biological approach we would be surprised at the results. However if we change the system too quickly we would go hungry but change towards biological agriculture is necessary and has to start today. Why? Because problems inherent in our present agricultural system i.e. excessive use of non-renewable resources e.g. energy, substantial top soil losses, loss of genetic diversity, increasing pest resistance to chemicals and environmental pollution will make that system inappropriate in 20-40 years

Here at Macdonald College, every now and then we get a little information in our lectures, about biological agriculture. Often; Biological agriculture is not scientifically proven so it is not feasible. But how do we know it's not feasible unless we research it.

But we are seeing more and more farmers and people interested in biological agriculture. How can we inform them? Is the only thing we can say: Not scientifically proven or never heard of it? Letters are received at EAP (Ecological Agricultural Project) asking if we offer a biological course. In U.S. and Europe large-scale production is existent and profitable. In Québec? on Macdonald campus? A biological agricultural course is becoming a necessity: a course to learn what it is, its limits and possibilities, to better evaluate it.

You say we can find this information through the use of term papers, that there is a lack of interest, that we do not have the resources, but, term papers are good but who has the time to look thoroughly at the system; interest is not lacking among students and a course will create interest; resources are there: EAP has resources and several professors have knowledge of the subject. The course would not necessarily have to be given by one teacher it could be a combination of teachers-students.

What can be the real obstacle to this course: the fear of a new approach, the fear of rethinking of our production system, or laziness?

Innovation has to start somewhere. It is always difficult to imagine something different when we have lived and taught in one direction for years.

In Québec, establishing biological agriculture would be an investment for its future self-sufficient production.

Johanne Hébert

U.S.D.A. Report on Organic Farming Reviewed

The Report and Recommendation on Organic Farming" was made available to the public in July 1980, produced by the United States Department of Agriculture Study Team on Organic Agriculture. The Report summarizes the findings of a year's activity based on a review of pertinent literature; information received through questionnaires and surveys and on-farm interviews with 69 organic farmers across 23 states. This is the most extensive compilation and analysis of information pertaining to organic agriculture (also referred to as ecological or biological agriculture) yet attempted by the so-called "agricultural establishment".

The study team was created, according to the report, in response to increasing numbers of requests from the general public and the agricultural community for information and advice on organic farming practices and techniques. These requests have largely stemmed from concerns about energy use, food quality and safety and environmental hazards associated with our present agriculture and food system. The report's stated purposes are 1) to gain a better understanding of organic farming systems; 2) to identify the kinds of research and educational programmes that relate to organic agriculture; 3) to learn more

about the contribution organic agriculture can make to the development of farming systems for the future. A fourth objective, though not specifically stated by the report, is to provide the U.S. Congress, educational and research institutions, and the USDA itself with a definition and critical evolution of organic agriculture to determine the extent to which these bodies should involve themselves in its development.

Overall, it is a document that speaks positively of the philosophy and practices of organic farming and expresses a commitment by the USDA to continue investigation into all its aspects. The report dispels effectively many of the myths that have been held regarding organic agriculture. It shows that farming organically is not the utilization of an obsolete technology; that organic farming is practiced and can be successful on farms of all sizes, from 20 to over 1500 acres. Survey and questionnaire information demonstrated that organic farmers, for the most part, are highly skilled managers, many having extensive university education in agriculture and a great deal of farming experience. Most were previously "conventional" or chemical-intensive farmers. The oft heard statement that crop yields

would be lower on a per acre basis is shown to be too sweeping a rejection of organic farming production and potential. The study team found many organic farmers to out-produce their conventional farmer neighbours.

The report does a reasonably good job, with the information available, of assessing the present extent

of organic farming practice in the US, and of evaluating the present impact of these practices on agricultural, institutional and human resources. The weakest aspect of the report, I feel, is its predictions for the future impact of organic farming on resources, especially the soil resource, and the United States' food production system. The key to successful organic farming is long term soil fertility. *contin'd p.4*

staffbox ont collaboré à cette édition:

* - Johanne Hébert *
* - Christine Deschamps *
* - Isabelle Montpetit *
* - Wilfrid Raby *
* - Hubert Brochard *
* - John Waterhouse *
* - Jean Vigneux *
* - Guy Tourigny *
* - Marc-Antoine Pelletier *
* & ceux qu'on oublie... *

MAIS OUI ! ÇA EXISTE

On parle beaucoup d'agriculture biologique, de coopératives mais où sont-elles et surtout survivent-elles ?

Je n'en connaissais aucune et c'est pour informer ceux qui sont dans mon cas que j'écris cet article.

La coopérative dont je suis maintenant membre, est à St-Cyr près de Richmond dans les Cantons de l'est. C'est une terre de 118 arpents. Le paiement se fait avec les parts sociales des membres (20 en ce moment) et le reste sous forme de versements par mois au propriétaire avec un taux d'intérêt de 12 % (entente

d'achat intéressante d'après moi). La coopérative vit depuis 2 ans et a une année de production à son actif: pommes de terre etc. L'été dernier, ils ont vendu à des restaurants végétariens comme "Le Commensale" et à des magasins d'aliments naturels comme chez "Toe". Ils n'ont eu aucun problème pour écouler leurs produits à des bons prix avec un retour de \$5,000 à \$6,000. (Je suis en Wildlife, mais on me dit que c'est un bon rendement).

Cet hiver, ils ont aussi vendu des sapins de Noël. Comme projet: construire une serre habitable utilisant l'énergie solaire et éolienne. Bien sur, ils essaient d'exploiter au maximum toutes les ressources disponibles

comme la vente d'herbes pour tisanes; une partie du terrain est réservé pour recevoir des campeurs l'été. Le camping est une source de revenu mais c'est aussi pour conscientiser le public à l'agriculture biologique et à l'alimentation saine. L'hiver, il y a aussi une maison logeant une dizaine de personnes.

Les visiteurs sont bienvenus pour discuter soit dans les Cantons de l'est soit à Montréal chaque mardi soir au 660 Louvain app.3.

Mariele Savard

Pour plus de renseignements appeler Denis Lévesque à: 381-2965.

(contin'd...U.S.D.A.)

Evaluation of this is therefore the key to assessing the potential of organic farming. The report predicts the "using of soil phosphorous and potassium in organic farming systems, a prediction largely based on work done in 1975 in the corn belt. This work that showed quantitative decreases in soil phosphores and potassium on organic farms. more extensive work by the same research group published in early 1980 placed the results of 1975 in doubt. The study team chose to ignore this. To my mind it undermines the import of the entire section on the soil resource.

Through modelling the report also attempts to analyze the possible economic impacts of a future increase in organic farming and the consequences of this upon the U.S. agricultural food system. The results of the analysis led the team to conclude that only small farms (sales less than \$2,500 per year) could be changed to organic methods without substansial

detrimental economic impact upon the food and marketing system. In developing this analysis, and thereby relegating organic farming systems to a minor role in America's agricultural future (though not all of its practices), the study team is guilty of not following one of its own guidelines. The final recommendations of the report urge the scientific community to investigate organic farming systems using a holistic research approach. But their own analysis of the future of an agricultural production system based on organic farming is not a holistic one as it was developed on a comparison of what they considered the typical organic and conventional farm. There was no attempt to include such variables as; changing land use patterns, changing consumer demand, new research developments, new economic conditions or changing

environmental consciousness in the public and private sectors. All these factors could have an impact on the development of a food system based on organic agriculture.

Finally, the report makes extensive recommendations to research and educational institutions and policy makers. The report identifies an enormous research need in support of organic farmers, as well as the need to clarify many of the poorly understood processes of organic farming which make it successful. It also calls for increased research activity on the existing and potential hazards of our present system. The report urges the establishment of public education programs, but especially highlights the need for educational institutions to include courses on organic agriculture in their curricula.

Canada's food system is not all that different from that of the US. The need to examine organic agriculture is much the same. Will Macdonald respond to this need as identified by the USDA, and follow its recommendations?

Rod MacRae



Teachers really did a great job, 2 weeks ago, when they came helping during the electricity failure at Macdonald College. Seen here passing along the emergency cable. (Photo M.M.)

About the Fantasy

About the "seriousness" or "fantasy" of the Harvest.

"This newspaper is nothing but a joke" some have said, "so that I wouldn't submit a serious article", others add. On the other hand, there are those who claim too much seriousness on our contents. Well, the Harvest has to be the students' gun ("culture is a gun"), no doubt about it, for students also have opinions on today's today; but between 2 classes, some fantasy does no harm, all right? So the Harvest will neither be serious as the vicar's wife nor a mere joke.

H. Brochard, Editing B.

PLEASE answer for the grad booklet, its YOUR MONEY for once you have the chance to decide what you want... it takes one minute.

EUROPEAN ECOAG

"Alternative agriculture is a broad term used to describe several different methods of farming, and the ideologies which inspire their use. These ideologies vary from concern that excessive fertilizer and pesticides affect crop quality, to Vegan agriculture, which completely eliminates exploitation of animals by man.

A fairly recently translated Dutch report in the March 1980 issue of "Agriculture and Environment" examines eight of the more prevalent European alternatives in agriculture. The emphasis in each of these theories is placed on a different aspect of growing food, and each theory is presented in the report.

Biodynamic agriculture sees interaction of mankind and the earth as a cyclical process, and man is responsible for maintaining the fertility of the soil, but also man has an "individuality of

enterprise", so that agriculture provides a means of expressing a creative nature. Biodynamic agriculture relies on "preparations" based on cow dung or compost with small quantities of certain plants added. Agricultural operations are carried out on different dates for different crops depending on where the moon is in relation to zodiac signs.

Howard-Balfour agriculture has its emphasis on crop rotations including legumes such as clover and on the development of symbiotic mycorrhizas. This emphasis is because of the greater uptake of minerals by dicot forage crops.

Lemaire Boucher agriculture is based on the theory of biological transmutation. This theory was developed to explain discrepancies in quantities of minerals found after biological processes which had formerly been attributed to experimental errors. Biological transmutation is the changing of two elements into another one or vice-versa, mediated by an organism. For example, 24/12 Mg 16/8 O will give 40/20 Ca

Inorganic fertilizers are supposed to inhibit these reactions, so organic fertilizers and a supposed catalyst for transmutations are applied instead.

Macrobiotic agriculture postulates that the lust for power, which produces war and strife is caused by dietary deficiencies, especially an unbalance of minerals. There is a large amount of theory concerned with "multibipolar forces" and "expanding" and "contracting" crops and days. There are days of "intense vibration" for various activities and crops.

Mazdauan agriculture is based on Zarathustran teachings. Organic-biological agriculture has as its base the provision of a suitable environment in the soil for lactic acid forming bacteria to flourish in order for the transfer of nucleoproteins to plants to take place. Agriculture is seen as a part of a closed ecosystem, including man, of which all parts should be healthy. Symbiotic root flora are thus very important and need organic food and need organic food and not chemical fertilizers.

ALTERNATIVE AGRICULTURE has from the beginning been much more careful with vulnerable natural, social, and individual structures than conventional agriculture.

Veganic agriculture deals mainly with vegetable production. Animal manures are not used.

Finally, the Working Party for the Natural Cultivation of Fruits and Vegetables, tries to produce agricultural products with a high biological value. Thus, the aim is on improving nutritional value, taste and the healthgiving qualities of the produce. The soils are sheltered with a green manure crop or a mulch. Integrated pest control is practiced using only non-toxic and bio-degradable pesticides. Earthworms are highly valued for the maintenance of soil fertility. Chemical

fertilizers are used at such a level as to provide the maximum biological value of the crop rather than maximum yield. There are critiques of some of the alternative theories. Despite the emphasis on theories of alternative agriculture the rest of the report merely deals with different practices used by alternative agriculturalists and conventional farmers. This includes sections on pesticide control, soil tillage, green manuring and mulches, fertilizers and crop rotation. There is also a chapter on the philosophy of alternative agriculture. In conclusion the report states: Certain forms of alternative agriculture have to be taken seriously. The experience of alternative methods can be of great value in considering a reappraisal of the agrarian production process and eating habits. alternative agriculture has from the beginning been much more careful with vulnerable natural, social and individual human structures than conventional agriculture... if practiced in an area dominated by conventional agriculture a level of production may be achieved that is comparable with the results of conventional agriculture (outside inputs of manure)... Large scale introduction of alternative agriculture will lead to a lower production level than the present one. This reduction would not be disastrous if more austere eating habits were to be accepted.

PROSE

Au petit matin lumineux,
d'un jour qui naissait coloré,
habillé du même manteau qu'à son coucher,
aux abords d'une étendue d'eau à demi gelée,
faisant refléter cette aube de couleur.

Pour un instant mes yeux ont fui cette image,
mon esprit quittait les dimensions,
dans lequel il trouve sont refuge quotidien.

Et d'un grand bond,
j'ai cru atteindre, cette rive, toujours trop éloignée,
pour la portée de ma conscience altruiste.

Cet infime petit moment,
en ce monde si grand et sans dimensions,
où la temporalité,
subit les frivolités d'une imagination,
que je retrouve si simplement;

dans ce territoire,
plus vaste que quelconque pays,
qui se trouve sous mon chapeau.

Marc Antoine Pelletier

CAFE
MIRVA,
à Ste-Anne.

UN COIN
CHAUD
POUR SE
DÉTENDRE,

A WARM, FRIENDLY PLACE
FOR YOUR STOMACH

74 B Rue
Ste-Anne
457-2063

ENTRE PROPAGANDE et DÉBAT

Entre propagande et débat, il y a la marge tirée par le docteur Bertrand Forest, directeur de la recherche au Ministère de l'agriculture. Lorsque l'argumentation échoue sur l'île aux Oeufs du terrorisme intellectuel, comme en fait foi la caricature tirée de ce pamphlet, l'on conclut au déplorable, à la stérilité d'un effort, qui eût été plus profitable à l'examen de l'agriculture biologique comme d'un remède proposé à l'épuisement des sols, à l'érosion massive des terres agricoles, à la montée exponentielle des coûts de production,

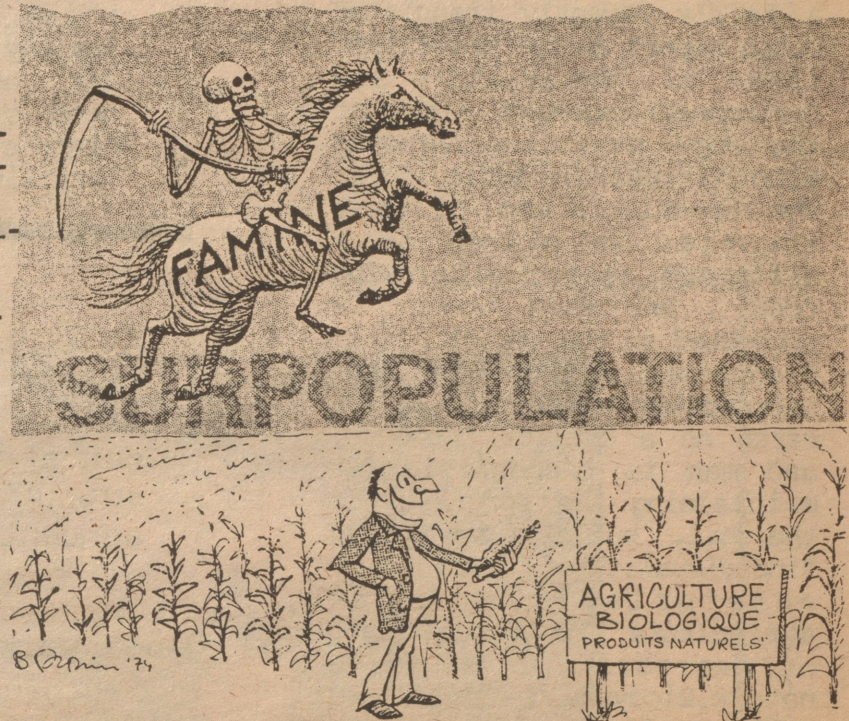
M. Forest insiste beaucoup sur la responsabilité qui incombe à la communauté agricole, de produire quantita-

tativement et qualitativement des aliments, afin de palier "à la sous-alimentation dont souffre les deux-tiers de l'humanité." Là-dessus, tout le monde s'entend. Mais la surenchère continue lorsqu'il ajoute que seule la poursuite du mode actuel de production permet d'atteindre cet objectif; alors que l'on sait très bien que la structure du marché international, le mode de distribution de la richesse, sont souvent à la solive du problème. Ne mentionnons que l'exemple du Sahel, qui exporta plus de protéines lors de la famine de 1973 qu'il n'en reçut de l'aide internationale.

Enfin, la partie dernière de ce pamphlet intitulée:

"Exagérations grossières, simplifications excessives, demi-vérités et faussetés relevées dans certains ouvrages sur l'agriculture, l'environnement et la pollution", relève plus de la chasse aux sorcières que de l'argumentation documentée. A se procurer par esprit de complétude, à lire... et à laisser.

Wilfrid Raby



Les sombres présages que l'agriculture biologique nous réserve

Tirée de: "Produits chimiques agricoles et environnement", par Ministère Agri. Qué.

Graduate Projects and Research

Jon Farber
M.Sc. Student
Dept. of Agricultural
Chemistry and Physics

Nov. 17, 1980

Large quantities of apple pulp from the apple juice and cider industries are discarded; this pulp may prove to be valuable source of dietary fiber for incorporation in the diet of human. We may eventually show that An Apple a Day does in fact Keep the Doctor Away.

The realization that dietary fiber is an essential component of a balanced diet has led to numerous investigations in the fields of chemistry nutrition and medicine to try to discover the why's, where's and how's of its diverse actions. It has been suggested that fiber could play a therapeutic and preventive role in human diseases from colon cancer to coronary heart disease to varicose veins and hemorrhoids. But what is dietary fiber and which type is best?

Dietary fiber is plant material resistant to digestion by human alimentary enzymes and comprises those structures which make up the plant cell wall. The four major components are pectin, cellulose, hemicellulose (a complex polysaccharide) and lignin (an inert phenylpropane polymer). The constitution of pectin and cellulose vary little from one plant to another; the constitution of hemicellulose and lignin isolated from different plants, however, varies greatly. Number of methods have been devised for the isolation of dietary fiber which give products that are similar in constitution to the dietary fiber that passes through our digestive tract. Experiments are underway in the Dept. of Agricultural Chemistry and Physics in which dietary fiber is being isolated from apple cores. The physical properties of the products are under investigation in relation to their water holding capacity and selective binding of minerals, bile acids, food preservatives, food coloring agents, certain harmful industrial chemicals such as PCBs and pesticides.

Rachel Pratt. Small-town girl out to conquer the big city. Pick the winner.

The city

Large cities may not be for everyone. But to Rachel there's no place more exciting or richer with opportunities.

Maybe she is a little starry-eyed, but Rachel has a far more worrisome problem. She's on a social merry-go-round.

Her day isn't complete unless she joins her friends for some pub-crawling after work. Much too often, pubs lead to parties. She's getting too little sleep, eating poorly, and her boss now regrets hiring her.

Rachel thinks it's all a great adventure. She forgets why she first came to the city. Truth is, unless she wises up and backs away soon, small-town girl may very well wind up big-city loser.

Rachel

Large cities may not be for everyone. But to Rachel there's no place more exciting or richer with opportunities.

Maybe she is a little starry-eyed, but fortunately for Rachel, she's a realist as well.

She's made some wise choices, including her decision on drinking. Not too often, not too much, is Rachel's motto. That goes for beer, wine or spirits, no matter where she is or with whom.

The interesting thing is, her moderate lifestyle hasn't made Rachel less popular. Nor has it made the city a less exciting place. It's just making her stronger. Strong enough to win.

Seagram's 
Distillers since 1857



AGRICULTURE & TECHNOLOGY

Here is the first of a series of articles which appeals to any student who desires to bring his or her comment on today's agriculture.

The author desirably would have acquired experience in the subject discussed.

Today, many people think farm productivity has reached it's highest level and that each unit of land can produce no more. If it is because they believe science has run it's course and that consequently, every agricultural commodity is produced at maximum capacity, they are wrong.

Canadian and U.S. agriculture has experienced a tremendous increase in productivity since the turn of the century. In 1900 the average farmer produced enough to feed himself and seven other people, in 1950 seventeen people including himself. Closer still, in 1978, this reached sixty-six people.

A large part of the progress was in the first half of the century, largely due to the mechanization of agriculture. The second half of the century has been more marked by the tireless advance of all the other sciences related to agriculture: genetics, soil condition, pest control and cultural practices.

But don't start believing that all that could be done has been done. The most admirable discoveries and advances are yet to come. For those sceptics among you, the following examples are just a few of the many fascinating possibilities for the foreseeable future: beef cattle twinning, third generation pesticides (pheromones, etc) combining total safety to the environment and also outstanding efficiency; photosynthesis enhancement in plants; the use of symbiotic microorganisms to help the fixation of some essential nutrients required for plant growth; development of crops that thrive on salt water.

If today's agricultural productivity seems to have levelled off, this is mostly due to an underutilisation of current technology for it is not rare to see some farmer's production exceeding average yields in such crops as corn, by 40% to 80%. Sound management and a look at what's new in the corn business helps them maintain their yields above average.

In the very near future, the challenge, indeed will rather come from economical and political issues. Economic in the sense that food will only be produced for those willing to buy it and pay for it. This is a real weight put upon farmer's shoulders. In many instances, production of sound nutritious crops could be boosted, but if nobody wants to buy them, then to hell with productivity. What about milk and poultry quotas? Much more could be produced, but there aren't enough people willing to buy that much. Lower prices would result in overproduction and quotas were therefore established to maintain high prices for producers. Large portions of fruit and vegetable crops are discarded each year because of a small blotch or insect puncture damage on the skin, which make this farm product unacceptable to us consumers.

The issue will also be political. Many prophets of doom are trying to convince the public that modern technology is only aimed at the destruction of all agricultural resources, and to the alteration of the environmental quality. If it has done so in the past, it was not intentionally. Science also progresses by trial and error. For instance, the wide use of fertilizers and pesticides at the beginning of the fifties has brought about many beneficial effects. Perhaps the most significant benefit was the ability to intensify food production on a given area of land and thereby feed an exploding population. However in the long run, their continuous use has led to ecological problems. With an increase in our awareness, new, safer chemicals, designed by modern technology, were put on the market. For instance, many pesticides of the new generation are less toxic than table salt for human

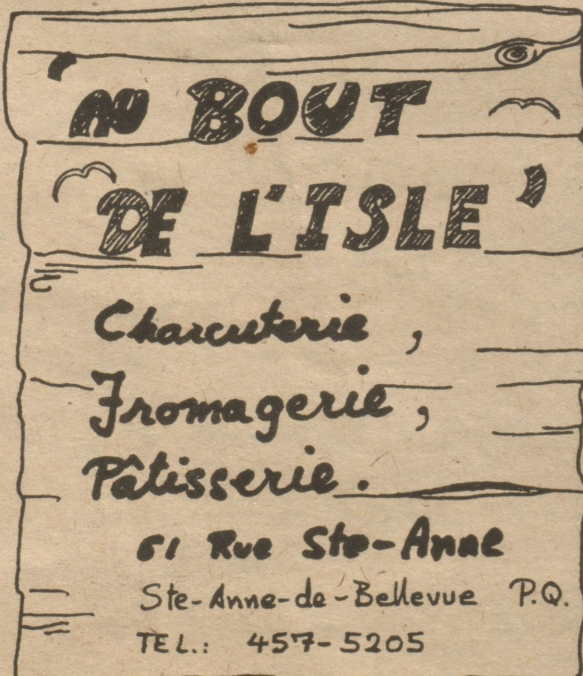
and wildlife, but still retain their high toxicity against the target pest. It means however that all the problems are going to be solved that way; a new solution always brings new problem, whether this solution was of biological, mechanical or chemical nature. A solution might be satisfactory to environmentalists, but inapplicable to farmers or even consumers. Quite often, a compromise has to be reached.

If ever these prophets of doom were successful in convincing the population to ask our representatives to stop the use of any new technology, or to suppress the utilization of existing ones, this would bring an end to any hope of feeding a hungry world. Indeed, already overpopulated, and with the expectation of a doubling in world population by the year 2000, the earth would not be able to support so much human life without the contribution of science, considering the fact that only 10% of the earth's surface is potential agricultural land, and that this portion is almost entirely under cultivation at the present time,

The above views are shared by all sorts of people. People at the government level, in the industry, producers, consumers and particularly the elite in agriculture, that is being formed in agricultural colleges and universities. You, at Macdonald College, certainly have opinions on possible trends in agriculture in the next decades; on what will be desirable from an ecological point of view, or what will be the economic and political ideals of all the people mentioned above, including yourself, taking into consideration national and international issues. I would like to invite all those who have such opinions, if you have strong feelings regarding what has been said in this article, if you have been involved in one field or another in agriculture in which you feel technology will constitute an important part of the improvement to be brought to it, you are welcomed to submit them in a written article. Those who disagree with the content of this article are also strongly encouraged to expose their ideas, with pertinent arguments of course.

This series of articles has only one intention: to provide a place for exchange. The Harvest has been created in response to our exchange needs, let's use it. You can communicate with the Harvest editing committee for the submission of your article.

Guy Tourigny.



UN MÉLANGE D'HIER et D'AUDACE ...

Il n'y a rien de véritablement ^{NOUVEAU} sous le soleil. Un modèle, que ce soit d'agriculture, d'éducation ou d'industrie, repose sur une image du monde, acquise d'un miroir fait d'hommes et d'histoire. Une société en vient à se développer un tel modèle, par souci d'authenticité à sa situation géographique, à sa nature, à sa façon de faire, afin de réaliser l'individu et la communauté, l'homme dans la communauté. Pour l'homme, le regroupement social représente la sécurité d'assurer sa survie, mais aussi permet dans une étape ultérieure, de sublimer ses instincts de survie, de leur astreindre un sens aux fins d'un acte culturel inscrit désormais dans une société qui est. Pourquoi ce préambule? Parce que rien ne s'est développé et ne se développe sans douleur, parce que rien n'est social sans crise.

Notre agriculture repose sur une société qui lui donne raison, en ce qu'elle est conforme au modèle d'exploitation des ressources, de distribution de la richesse, de spécialisation de la tâche propre à sa vision de la Nature contre laquelle elle s'est construite. Voilà donc la raison principale pour laquelle un numéro spécial sur l'agriculture biologique ne saurait se concevoir sans présenter le projet social qu'elle soutend. D'ailleurs, l'agriculture biologique ne saurait se réaliser sans trahir, si elle ne répond pas à un modèle où l'individu retrouve le moyen de prendre parti pour des structures qu'il s'est lui-même donné. Présenter succinctement un tel projet tient du rase-motte journalistique, mais raisonnons tout de même!

Réaliser l'agriculture biologique dans le contexte actuel rallie le réalisable, le possible, mais aussi la répétition de structures centralisatrices, autant industrielles, académiques, commerciales que décisionnelles. Au sein de l'agriculture conventionnelle, l'agriculture biologique fait office de parasite; point de non-retour tant que l'on n'envisage que la modification des méthodes culturelles, et de la structure économique. Le parasite ne tardera pas à être gobé par une structure plus grosse, plus organisée; par un capitalisme que la stricte raison économique maintient en place, puisqu'il n'a plus de raison sociale. L'agriculture biologique implique donc une transformation sociale, quelle pourrait-elle être? Une certitude s'affirme très tôt: le critère sur lequel l'on pourra juger ces trans-

formations, sera une capacité de modifier les structures actuelles du travail, de proposer une décentralisation comprenant des principes d'autogestion et de cogestion.

La dégradation des communautés rurales par la fermeture des chemins de fer, par la construction d'autoroutes boudant les villages, par la fermeture des écoles rurales, représente autant d'aspect de la centralisation administrative; la recherche agronomique referme un autre aspect, où l'expérience quotidienne du producteur trouve peu de place. L'esprit rural s'étiole de toiles d'araignées, le voici à recréer.

La centralisation engendre l'inflexibilité. Si l'on ne se sent pas lié de fait à un pays, à un village, à une terre de nos souvenirs, propre à engendrer les souvenirs des générations futures, nous cessons de réagir aux événements qui décideront du sort de cette terre de tant de travaux et de jours. Bref, développer un souci de la personne dans ses racines, dans son âme, dans son unicité.

Si l'on tente de schématiser, une société à échelle humaine pourrait prendre cette forme:

- 1): Une société non segmentée, où le travail et le jeu se marient, où l'éducation est liée au travail, tout en conservant le jeu et l'aspect culturel, où les âges ne se divisent entre l'école, le travail et l'hospice.
- 2): Redécouverte de l'esprit de communauté, où en cas de besoin, une personne peut compter sur le soutien de d'autres.
- 3): Un sens de la continuité maintenu par des manifestations culturelles, populaires, un langage, une façon de faire.

4): Une structure sociale petite, dans le travail, dans l'organisation communautaire.

5): La relation homme-nature demeure harmonieuse, l'homme est proche de sa source de pain quotidien, rien de ce qui est enlevé au sol ne reste sans redevance équivalente.

Et l'on n'a pas parlé de l'intégration à ce brouillon de société, de la technologie, de l'information, de l'économie. Tout reste à faire. Dans un monde de chômage chronique, une agriculture plus intensive en apport humain suggère sa solution parmi d'autres. Et la science, et les arts, et cette fameuse égalité des chances inégales? Une grosse partie de la réponse se trouve chez ceux qui détiennent les terres et les exploite. A l'heure où je clos la ligne, il est le temps des moyens. Il faut battre le fer pendant que l'être est chaud...

Wilfrid Raby

Killer sheep terrorize countryside!

(From special reporter Malcolm Morrison).

1981 did not begin well for the people of the tiny town of Baaaaning, in Queensland Australia, for the town was surrounded by 127 000 killer sheep from the large sheep stations of the area. "We're being baaakaided" exclaimed the mayor of the tiny agglomeration.

It seems the sheep were stirred into a frenzy when a black lamb was chosen for the part in the nativity scene over the standard fleacy white marino.

The only casualty so far has young Hugie Brown who was chosen as a negotiator. On the photograph is H.B., just before the headram butted him, knocked him unconscious and dragged him away to be held hostage. More news as it develops.



(Photos: M.M.)

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CLAUDE NÉON

Mother watching her son being dragged away.